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## **SUBSURFACE SOIL-GAS INVESTIGATION REPORT**

**K&L ANODIZING CORPORATION  
1200 SOUTH VICTORY BLVD.  
BURBANK, CALIFORNIA**

**OCTOBER, 1995**

### **PREPARED FOR:**

**Jan Phillips  
K&L ANODIZING CORPORATION  
1200 South Victory Blvd.  
Burbank, California 91502**

**TRG Number 4685-K&L**

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# **SUBSURFACE SOIL-GAS INVESTIGATION REPORT**

**K&L ANODIZING CORPORATION  
1200 SOUTH VICTORY BLVD.  
BURBANK, CALIFORNIA**

## **1.0 EXECUTIVE SUMMARY**

This report presents soil-gas investigation results for work conducted on October 26, 1995 at 1200 South Victory Blvd., City of Burbank, State of California. The soil-gas investigation included collection of 5 vapor samples from 3 sampling locations (SG-1 through SG-3). During the soil-gas investigation, detectable levels of two halogenated compounds, 1,1,1-trichloroethane (111-TCA), and tetrachloroethene (PCE), were identified in trace ( $<5.0 \mu\text{g/L}$ ) to low levels ( $<50 \mu\text{g/L}$ ). Based on the results that only small amounts of 111-TCA and PCE exist in the soils in the area investigated, it appears no further action is required with respect to VOC's at this Site.

## **2.0 INTRODUCTION**

This report summarizes the soil-gas investigation conducted by The Reynolds Group (TRG) at 1200 South Victory Boulevard, Burbank, California (the Site). The work was conducted on behalf of Ms. Jan Phillips and in accordance with the TRG work plan proposal dated September 13, 1995. Sample collection and analysis were conducted by Optimal Technology Inc. of Summerland, California.

## **3.0 OBJECTIVE**

The objective of the soil-gas investigation was to screen the near surface soils at the Site for possible volatile organic compounds (VOCs).

## **4.0 SCOPE OF WORK**

To fulfill the objectives of the subsurface investigation, the following scope of work was conducted by TRG as approved by the Regional Water Quality Control Board:

Task 1:           Collected five soil-gas samples from three sampling locations.

- Task 2: Completed laboratory analyses of collected soil vapor samples in accordance with LA-RWQCB guidelines ("Workplan Requirements for Active Soil Gas Investigation, Well Investigation Program": March, 1994).
- Task 3: Prepared this report documenting the methodology, findings, field and analytical test results, and conclusions of this investigation.

A detailed description of the work performed during the investigation is presented in the following sections of this report.

## **5.0 FIELD INVESTIGATION**

TRG performed the soil-gas survey field investigation on October 26, 1995. Ms. Ana Veloz of the Regional Water Quality Control Board was present during part of the field work. The investigation included one area inside the building, adjacent to an existing clarifier, one area outside side of the building, adjacent to the former degreaser, and one area adjacent to the chemical storage room (Figure 2). The sampling and analytical testing were performed by Optimal Technology Inc. of Summerland, California. For the field investigation, all work was conducted according to the standards of the California Regional Water Quality Control Board, Los Angeles Section as outlined in "Workplan Requirements for Active Soil Gas Investigation, Well Investigation Program": dated March, 1994.

### **5.1 Soil-Gas Survey**

TRG collected five soil-gas samples from three locations during the course of the soil-gas investigation (Figure 2). Gas samples were collected at approximately five ft bgs for three sampling locations and 15 ft bgs for two locations. Location SG-1 (located adjacent to the chemical storage room), and location SG-2 (located near the former degreaser) were sampled at both five and 15 ft bgs. Location SG-3, located next to the clarifier inside the building, was sampled at five ft bgs. Soil to approximately fifteen ft bgs consisted of silty sand.

## **5.2 Soil Vapor Acquisition and Handling**

At each sample location, probes were advanced to designated depths, soil vapor samples were extracted, and samples were immediately analyzed by the on-site laboratory. Sampling was performed by advancing 1/2 inch diameter galvanized hollow steel gas probes with an electric hammer. An electric rotary hammer drill was used to drill a one inch in diameter hole through the overlying concrete to allow probe placement.

At each sampling location, an electric vacuum pump (set to draw 2 liters/minute of soil vapors at a maximum vacuum of 100 inches of water) was attached to the probe and purged vapors for 45 seconds (approximately 1500 milliliters) at an average vacuum of 10 inches of water, extracting approximately two purge volumes of air prior to sample collection. A 3-point purge vs. concentration study was performed on October 26, 1995. This investigation determined that no significant change in concentration vs. purge volume occurred. Based on these results, approximately 2 purge volumes were used at subsequent sampling locations.

Samples were obtained in Hamilton gas-tight syringes by puncturing silicone tubing that connected the sampling probe and the vacuum pump. New silicone tubing was used at each sampling point to prevent cross contamination. After collection, samples were immediately injected into the gas chromatograph. New sampling probes were used after each sample collection, eliminating decontamination procedures between samples. In addition, equipment blanks were analyzed between each sample by passing ambient air through the sampling apparatus.

All analyses were performed on a laboratory grade Hewlett Packard model 5890 Series II gas chromatograph (GC) equipped with a Photo Ionization Detector (PID) and an Electron Capture Detector (ECD). Restec wide bore capillary columns, using hydrogen as the carrier gas, were used to perform all analysis. All data generated by the GC was collected on an IBM compatible personal computer and a specially designed software package converted GC data to concentrations expressed as micrograms/liter ( $\mu\text{g/L}$ ).

### 5.3 Quality Assurance/Quality Control, (QA/QC) Procedures

#### *Calibrations*

On October 19, 1995, an initial 3-point calibration was performed prior to sampling by preparing a calibration solution from a pre-mixed standard supplied by Supelco, Inc. The standard solution contained 19 common halogenated solvents and 6 aromatic hydrocarbons. The individual compound concentrations in the standard ranged from 0.025 nanograms per micrograms (ng/μg) to 0.25 ng/μg.

The initial three point calibration consisted of 20, 50, and 100 microliter (μl) injections of the calibration solution. An average response factor (RF) was calculated for each analyte and used to determine concentrations. In addition, the percent relative standard deviation (%RSD) between the three calibration levels was determined to assure the instrument was operating properly. The %RSD must be less than 15% or an additional calibration is performed.

Method detection limits were calculated to 1.0 μg/L for both the halogenated solvents and the aromatic hydrocarbons.

**TABLE 1**

Dichlorofluoromethane	Carbon Tetrachloride	Benzene
Trichlorofluoromethane	1,2-Dichloroethane	Toluene
1,1-Dichloroethene	Trichloroethene	Freon 113
Methylene Chloride	1,1,2-Trichloroethane	Ethylbenzene
trans-1,2-Dichloroethene	Tetrachloroethene	m\p-Xylene
1,1-Dichloroethane	Chloroform	o-Xylene
cis-1,2-Dichloroethene	1,1,1,2-Tetrachloroethane	Vinyl Chloride
1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	Freon 113

#### *Laboratory Check Sample*

An independent laboratory check sample containing the 25 compounds listed in Table 1 was run as the first sample after the initial 3-point calibration on October 19, 1995. This sample was prepared independent (with different lot numbers) of the sample used in the 3-

point calibration. This assured that the standard used during the initial calibration had not degraded. These laboratory check samples must agree within 15% of the true concentration injected.

### *Continuing Calibrations*

A one-point continuing calibration (mid-point) check using the compounds listed in Table 2 was run at the beginning of the work day (October 26, 1995) to verify the integrity of the existing 3-point calibration. This continuing calibrations must agree within 15% of the most recent three-point calibration or an additional three-point calibration would be performed and the new calibration factor used for the subsequent samples. This standard is also run at the end of the work day to assure that the instrument response had not changed.

**TABLE 2**

Methylene Chloride	Trichloroethene
1,2-Dichloroethane	1,1,2-Trichloroethane
1,1-Dichloroethene	Tetrachloroethene
trans-1,2-Dichloroethene	Benzene
1,1-Dichloroethane	Toluene
cis-1,2-Dichloroethene	Ethylbenzene
1,1,1-Trichloroethane	m/o-Xylene

### *Sample Replicates*

A duplicate analysis was run when concentrations exceeded the calibration range of the instrument/detector being used. The duplicate sample was dilute using a smaller injection volume to assure that the instrument response was within 50% of the calibrated range. In addition, a duplicate analysis was run a minimum of once each day to evaluate the reproducibility of both the sampling system and the instrument. If the difference between samples collected varies more than 20%, the entire system was evaluated and the cause of the inconsistency was determined and corrected.



### *Equipment Blanks*

Equipment blanks were run at the beginning of each work day, after calibrations, and at a minimum of once every five samples analyzed. New vapor probes were used following each sample with positive results or when probes were damaged during installation. The blanks were collected by hooking up the entire sampling system above ground and collecting an ambient air sample. These blanks checked the probes, fittings, septum, syringe, GC column, GC detector and the ambient air. If contamination was found to exist, the procedure was repeated until the source was determined and corrected. Blank results are given along with the sample results (Appendix B).

## **6.0 RESULTS AND FINDINGS**

Subsurface soil conditions at this Site were predominantly a relatively high permeability silty sand. This silty sand appeared to be homogeneous throughout the study area. Depth to ground water was unknown at the time of the investigation.

During the soil-gas investigation, detectable levels of two halogenated compounds, 1,1,1-trichloroethane (111-TCA), and tetrachloroethene (PCE), were identified in trace (<5.0 µg/L) to low levels (<50 µg/L). 111-TCA was detected in all five samples at concentrations ranging from 4.7 µg/L to 10.6 µg/L. PCE was detected at all five samples at concentrations ranging from 1.1 µg/L to 1.8 µg/L. Multiple depth samples collected at locations SG-1 and SG-2 showed a decrease in concentration with depth.

During the course of the field investigation, TRG reviewed the QA/QC data performed by Optimal Technology to assess the impact of sampling equipment, laboratory equipment and laboratory procedures on analytical results. The review consisted of identifying analyte concentrations in sampling or test equipment, duplicate sample variances, and calibration shifts that would affect the analytical results. No results were outside of the QA/QC acceptable limits.

A complete table of analytical results, equipment blanks, duplicate results and calibration check samples are included with this report.

## 7.0 CONCLUSIONS

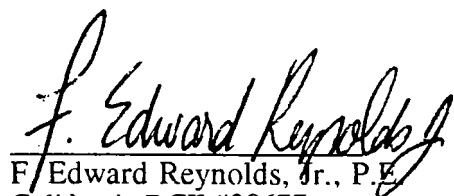
Based on the results of this investigation, low levels of 111-TCA and PCE were detected. The maximum contamination levels (MCL's) allowed by the U.S. Environmental Protection Agency are 200 µg/L for 111-TCA and 5 µg/L for PCE. Based on the results that only small amounts of 111-TCA and PCE exist in the soils in the area investigated, it appears no further action is required with respect to VOC's at this Site.

## 8.0 LIMITATIONS

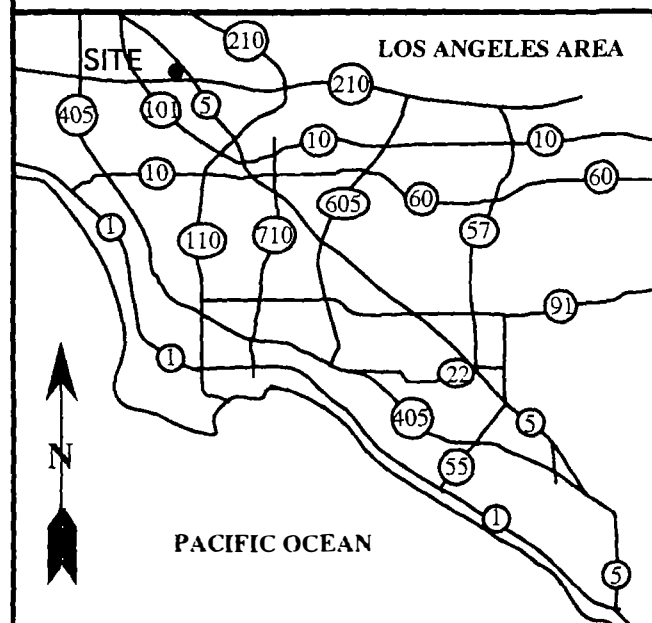
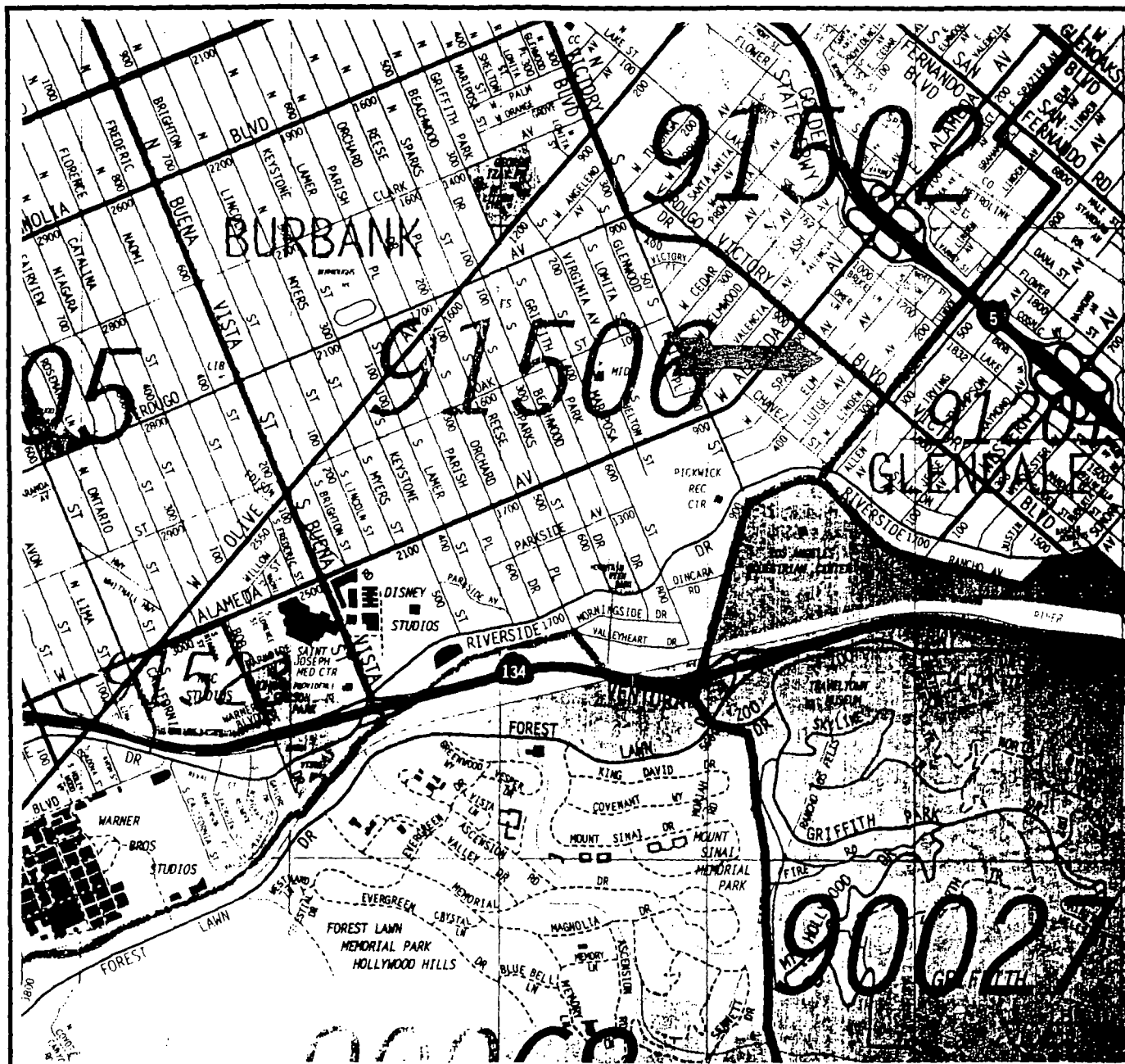
The findings and conclusions presented above are based upon the agreed upon scope of work outlined in the above report. Soil vapor testing is only a subsurface screening tool and does not represent actual contaminant concentrations in either the soil and/or ground water. Consultant makes no warranties or guarantees as to the accuracy or completeness of information obtained from information provided or compiled by others. It is possible that information which was not found exists beyond the scope of this investigation. Additional information which was not found or available to Consultant at the time of writing of this report, may result in a modification of the findings and conclusions presented. This report is not a legal opinion.



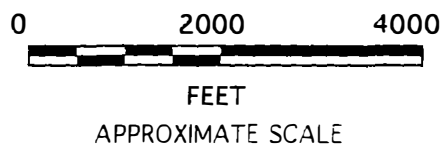
Douglas S. Hodge, Ph.D.  
Project Manager

  
F. Edward Reynolds, Jr., P.E.  
California RCE #38677

**FIGURE 1**  
**SITE LOCATION MAP**



ADAPTED FROM 1995 LA/ORANGE COUNTY THOMAS BROTHERS GUIDE PAGE 563.



**FIGURE 1**  
**SITE LOCATION MAP**

K. & L. ANODIZING CORP.  
1200 S. VICTORY BLVD.  
BURBANK, CALIFORNIA

**THE REYNOLDS GROUP**

OCTOBER 1995

**FIGURE 2**  
**SITE PLOT PLAN AND SAMPLING LOCATIONS**

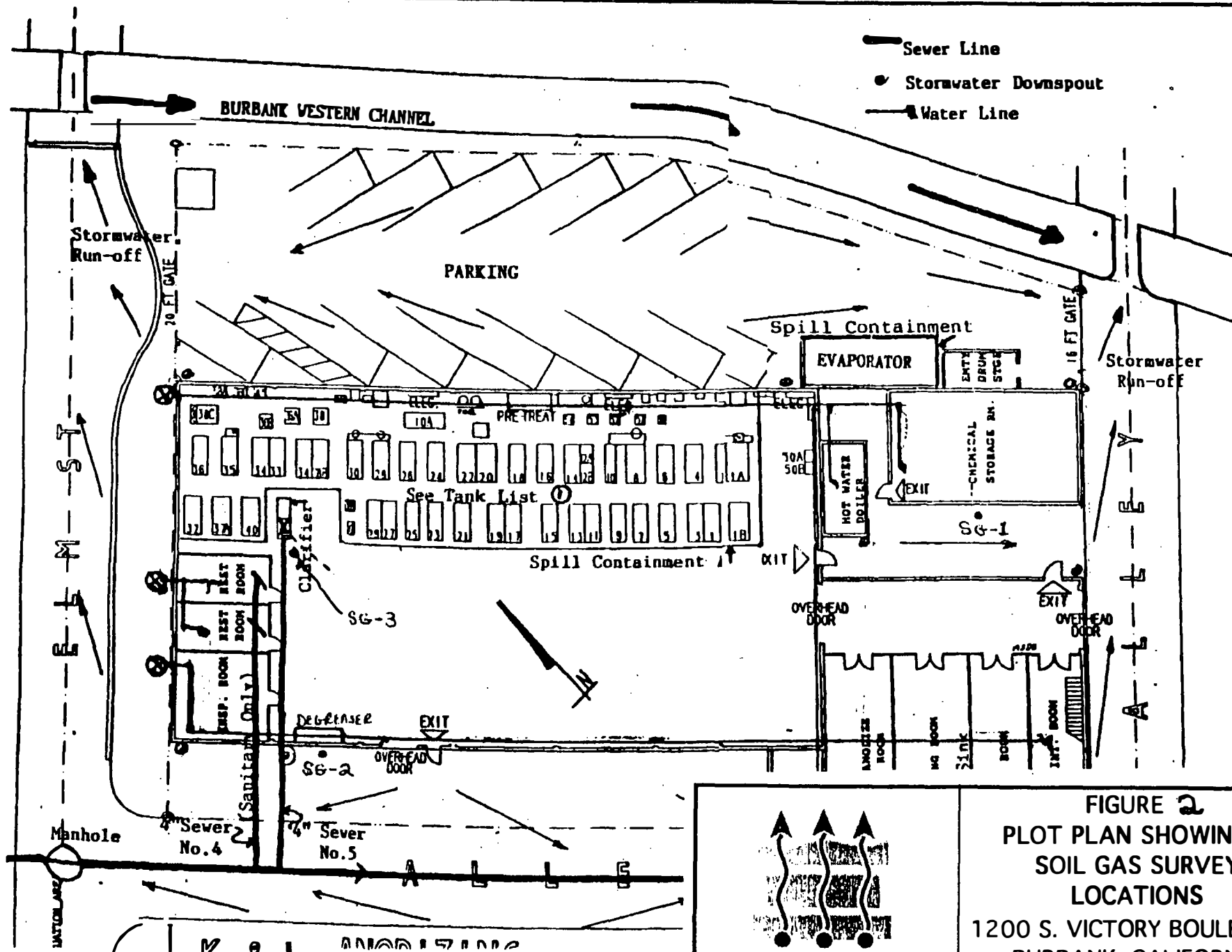


FIGURE 2  
 PLOT PLAN SHOWING 3  
 SOIL GAS SURVEY  
 LOCATIONS  
 1200 S. VICTORY BOULEVARD  
 BURBANK, CALIFORNIA  
 SEPTEMBER 1995

THE  
 REYNOLDS GROUP

**APPENDIX A**  
**LABORATORY REPORT**

# SOIL GAS SAMPLE RESULTS

**SITE NAME:** 1200 S. Victory Blvd. - Burbank, CA

**LAB NAME:** Optimal Technology Inc.

**DATE:** Oct. 26, 1995

**ANALYST:** Timothy L. Theisen

**COLLECTOR:** Timothy L. Theisen

**INSTRUMENT ID:** HP5890-2

**NORMAL INJECTION VOLUME:** ECD = 500 ul / PID = 500 ul

**PAGE:** 1 of 2

SAMPLE ID:	BLANK-1	SQ-1-5-A	SQ-1-5-B	SQ-1-5-C	SQ-1-15	SQ-2-5
Sampling Depth (ft):	N/A	5.0	5.0	5.0	15.0	5.0
Purge Volume (ml):	N/A	500	1000	1500	2000	1000
Vacuum (in. of water):	N/A	0	0	0	0	0
Sampling Time:	N/A	N/A	N/A	N/A	N/A	N/A
Injection Time:	N/A	N/A	N/A	N/A	N/A	N/A
Injection Volume:	500/500	500/500	100/500	100/500	50/500	50/500
Dilution Factor ECD:	2	2	10	10	20	20
Dilution Factor PID:	2	2	2	2	2	2

COMPOUND	DET	AREA	CONC	AREA	CONC	AREA	CONC	AREA	CONC	AREA	CONC	AREA	CONC
Dichlorofluoromethane	ECD	0	<1.0	0	<1.0	0	<1.0	0	<1.0	0	<1.0	0	<1.0
Chloroethane	ECD	0	<1.0	0	<1.0	0	<1.0	0	<1.0	0	<1.0	0	<1.0
Trichlorofluoromethane	ECD	0	<1.0	0	<1.0	0	<1.0	0	<1.0	0	<1.0	0	<1.0
Trichlorotrifluoromethane	ECD	0	<1.0	0	<1.0	0	<1.0	0	<1.0	0	<1.0	0	<1.0
Methylene Chloride	ECD	0	<1.0	0	<1.0	0	<1.0	0	<1.0	0	<1.0	0	<1.0
1,1-Dichloroethane	ECD	0	<1.0	0	<1.0	0	<1.0	0	<1.0	0	<1.0	0	<1.0
Chloroform	ECD	0	<1.0	0	<1.0	0	<1.0	0	<1.0	0	<1.0	0	<1.0
1,1,1-Trichloroethane	ECD	0	<1.0	5908119	12.5	996607	10.5	1010526	10.6	369395	7.8	223125	4.7
Carbon Tetrachloride	ECD	0	<1.0	0	<1.0	0	<1.0	0	<1.0	0	<1.0	0	<1.0
1,2-Dichloroethane	ECD	0	<1.0	0	<1.0	0	<1.0	0	<1.0	0	<1.0	0	<1.0
Trichloroethene	ECD	0	<1.0	0	<1.0	0	<1.0	0	<1.0	0	<1.0	0	<1.0
1,1,2-Trichloroethane	ECD	0	<1.0	0	<1.0	0	<1.0	0	<1.0	0	<1.0	0	<1.0
Tetrachloroethene	ECD	0	<1.0	1181900	1.4	243315	1.5	223778	1.4	121977	1.5	0	<1.0
1,1,1,2-Tetrachloroethane	ECD	0	<1.0	0	<1.0	0	<1.0	0	<1.0	0	<1.0	0	<1.0
1,1,2,2-Tetrachloroethane	ECD	0	<1.0	0	<1.0	0	<1.0	0	<1.0	0	<1.0	0	<1.0
Vinyl Chloride	PID	0	<1.0	0	<1.0	0	<1.0	0	<1.0	0	<1.0	0	<1.0
1,1-Dichloroethene	PID	0	<1.0	0	<1.0	0	<1.0	0	<1.0	0	<1.0	0	<1.0
trans-1,2-Dichloroethene	PID	0	<1.0	0	<1.0	0	<1.0	0	<1.0	0	<1.0	0	<1.0
cis-1,2-Dichloroethene	PID	0	<1.0	0	<1.0	0	<1.0	0	<1.0	0	<1.0	0	<1.0
Benzene	PID	0	<1.0	0	<1.0	0	<1.0	0	<1.0	0	<1.0	0	<1.0
Toluene	PID	0	<1.0	0	<1.0	0	<1.0	0	<1.0	0	<1.0	0	<1.0
Ethylbenzene	PID	0	<1.0	0	<1.0	0	<1.0	0	<1.0	0	<1.0	0	<1.0
m/p/o-Xylene	PID	0	<1.0	0	<1.0	0	<1.0	0	<1.0	0	<1.0	0	<1.0

Unidentified Peaks (ECD): 0 0 0 0 0 0

Unidentified Peaks (PID): 0 0 0 0 0 0

**COMMENTS:** All results are reported in ug/L



# SOIL GAS SAMPLE RESULTS

**SITE NAME:** 1200 S. Victory Blvd. - Burbank, CA

**LAB NAME:** Optimal Technology Inc.

**DATE:** Oct. 26, 1995

**ANALYST:** Timothy L. Theisen

**COLLECTOR:** Timothy L. Theisen

**INSTRUMENT ID:** HP5890-2

**NORMAL INJECTION VOLUME:** ECD = 500 ul / PID = 500 ul

**PAGE:** 2 of 2

<b>SAMPLE ID:</b>	<b>SG-2-15</b>	<b>SG-3-5</b>				
<b>Sampling Depth (ft):</b>	15.0	5.0				
<b>Purge Volume (ml):</b>	2000	1000				
<b>Vacuum (in. of water):</b>	0	0				
<b>Sampling Time:</b>	N/A	N/A				
<b>Injection Time:</b>	N/A	N/A				
<b>Injection Volume:</b>	100/500	100/500				
<b>Dilution Factor ECD:</b>	10	10				
<b>Dilution Factor PID:</b>	2	2				

COMPOUND	DET	AREA	CONC	AREA	CONC								
Dichlorofluoromethane	ECD	0	<1.0	0	<1.0								
Chloroethane	ECD	0	<1.0	0	<1.0								
Trichlorofluoromethane	ECD	0	<1.0	0	<1.0								
Trichlorotrifluoromethane	ECD	0	<1.0	0	<1.0								
Methylene Chloride	ECD	0	<1.0	0	<1.0								
1,1-Dichloroethane	ECD	0	<1.0	0	<1.0								
Chloroform	ECD	0	<1.0	0	<1.0								
1,1,1-Trichloroethane	ECD	484267	5.1	457856	4.8								
Carbon Tetrachloride	ECD	0	<1.0	0	<1.0								
1,2-Dichloroethane	ECD	0	<1.0	0	<1.0								
Trichloroethene	ECD	0	<1.0	0	<1.0								
1,1,2-Trichloroethane	ECD	0	<1.0	0	<1.0								
Tetrachloroethene	ECD	181334	1.1	292807	1.8								
1,1,1,2-Tetrachloroethane	ECD	0	<1.0	0	<1.0								
1,1,2,2-Tetrachloroethane	ECD	0	<1.0	0	<1.0								
Vinyl Chloride	PID	0	<1.0	0	<1.0								
1,1-Dichloroethene	PID	0	<1.0	0	<1.0								
trans-1,2-Dichloroethene	PID	0	<1.0	0	<1.0								
cis-1,2-Dichloroethene	PID	0	<1.0	0	<1.0								
Benzene	PID	0	<1.0	0	<1.0								
Toluene	PID	0	<1.0	0	<1.0								
Ethylbenzene	PID	0	<1.0	0	<1.0								
m/p/o-Xylene	PID	0	<1.0	0	<1.0								

**Unidentified Peaks (ECD):** 0 0

**Unidentified Peaks (PID):** 0 0

**COMMENTS:** All results are reported in ug/L

# SOIL GAS INITIAL CALIBRATION STANDARD REPORT

SITE NAME: 1200 S. Victory Blvd. - Burbank, CA

LAB NAME: Optimal Technology Inc.

DATE: Oct. 19, 1995

ANALYST: Timothy L. Theisen

STD LOT ID NO.: LA-48322/LA-48327

INSTRUMENT ID: HP5890-2

NORMAL INJECTION VOLUME: 20, 50 and 100 ul

INJECTION TIME: 4:30 - 5:30 am

COMPOUND	DET	1st CONC				2nd CONC				3rd CONC				RF AVE	SD	%RSD
		RT	MASS	AREA	RF	RT	MASS	AREA	RF	RT	MASS	AREA	RF			
Dichlorodifluoromethane	ECD	0.871	0.5	200262	400523	0.871	1.25	478267	382613	0.871	2.5	897461	358984	380707	20835	5.47%
Chloroethane	ECD	1.532	2.5	1519	608	1.040	6.25	3574	572	1.040	12.5	6877	550	577	29	5.04%
Trichlorofluoromethane	ECD	1.228	0.5	2235808	4471615	1.228	1.25	5590037	4472030	1.228	2.5	11109792	4443917	4462521	16113	0.36%
Trichlorotrifluoromethane	ECD	1.394	0.5	345254	690608	1.394	1.25	836711	669368	1.394	2.5	1632983	663193	671023	18712	2.79%
Methylene Chloride	ECD	1.577	2.5	16039	6416	1.577	6.25	44103	7056	1.577	12.5	82109	6569	6680	335	5.01%
1,1-Dichloroethane	ECD	1.869	2.5	5998	2399	1.869	6.25	14747	2360	1.869	12.5	29153	2332	2364	34	1.43%
Chloroform	ECD	2.284	0.5	163551	327103	2.284	1.25	437936	350349	2.284	2.5	856013	342005	339819	11776	3.47%
1,1,1-Trichloroethane	ECD	2.401	0.5	472482	944964	2.401	1.25	1187694	950155	2.401	2.5	2379412	951765	948962	3554	0.37%
Carbon Tetrachloride	ECD	2.497	0.5	1497349	2994698	2.497	1.25	3438417	2750734	2.497	2.5	6594218	2637687	2794373	182462	6.53%
1,2-Dichloroethane	ECD	2.642	2.5	20525	8210	2.642	6.25	55380	8861	2.642	12.5	108887	8711	8594	341	3.96%
Trichloroethene	ECD	2.993	0.5	201540	403080	2.993	1.25	558828	447063	2.993	2.5	1053621	421408	423850	22093	5.21%
1,1,2-Trichloroethane	ECD	4.228	2.5	107991	43197	4.228	6.25	275751	44120	4.228	12.5	510160	40813	42710	1707	4.00%
Tetrachloroethene	ECD	4.363	0.5	819954	1639909	4.363	1.25	2112248	1689798	4.363	2.5	4037593	1615037	1648248	38072	2.31%
1,1,1,2-Tetrachloroethane	ECD	5.195	0.5	548384	1096768	5.195	1.25	1411862	1129490	5.195	2.5	2961489	1184596	1136951	44387	3.90%
1,1,2,2-Tetrachloroethane	ECD	6.414	0.5	93759	187519	6.414	1.25	214415	171532	6.414	2.5	459907	183983	181004	8394	4.64%
Vinyl Chloride	PID	2.034	2.5	14398	5769	2.034	6.25	40623	6500	2.034	12.5	79724	6378	6212	397	6.39%
1,1-Dichloroethene	PID	2.746	2.5	21640	8656	2.746	6.25	57235	9158	2.746	12.5	116746	9340	9051	354	3.91%
trans-1,2-Dichloroethene	PID	3.195	2.5	39249	15700	3.195	6.25	99725	15956	3.195	12.5	183264	14661	15439	686	4.44%
cis-1,2-Dichloroethene	PID	3.866	2.5	19346	7738	3.866	6.25	51545	8247	3.866	12.5	98882	7911	7985	259	3.25%
Benzene	PID	4.633	2.5	40264	16106	4.633	6.25	103268	16523	4.633	12.5	192348	15388	16005	574	3.59%
Toluene	PID	6.316	2.5	30136	12054	6.316	6.25	76622	12260	6.316	12.5	153210	12257	12190	118	0.96%
Ethylbenzene	PID	7.867	2.5	18133	7253	7.867	6.25	48136	7702	7.867	12.5	95213	7617	7624	238	3.17%
m/p-Xylene	PID	7.955	5	41370	8274	7.955	12.5	113219	9058	7.955	25	203479	8139	8490	496	5.84%
o-Xylene	PID	8.430	2.5	21327	8531	8.430	6.25	53727	8596	8.430	12.5	119321	9546	8891	568	6.39%

# LABORATORY CONTROL CHECK STANDARD

**SITE NAME:** 1200 S. Victory Blvd. - Burbank, CA

**LAB NAME:** Optimal Technology Inc.

**DATE:** Oct. 19, 1995

**ANALYST:** Timothy L. Theisen

**STD LOT ID NO.:** LA-42967/LA-42996

**INSTRUMENT ID:** HP5890-

**NORMAL INJECTION VOLUME:** ECD = 50 ul / PID = 50 ul

**INJECTION TIME:** 5:17 am File: E/PEN-04.D

COMPOUND	DET	RT	MASS	AREA	RF	%DIFF	ACC RGE
Dichlorodifluoromethane	ECD	0.910	1.25	456192	364954	4.14%	± 15%
Chloroethane	ECD	1.147	6.25	3836	614	-6.45%	± 15%
Trichlorofluoromethane	ECD	1.382	1.25	4984629	3987703	10.64%	± 15%
Trichlorotrifluoromethane	ECD	1.648	1.25	732656	586125	12.65%	± 15%
Methylene Chloride	ECD	1.933	6.25	38265	6122	8.35%	± 15%
1,1-Dichloroethane	ECD	2.409	6.25	13987	2238	5.32%	± 15%
Chloroform	ECD	3.080	1.25	387599	310079	8.75%	± 15%
1,1,1-Trichloroethane	ECD	3.230	1.25	1039879	831903	12.34%	± 15%
Carbon Tetrachloride	ECD	3.369	1.25	3292456	2633965	5.74%	± 15%
1,2-Dichloroethane	ECD	3.549	6.25	52323	8372	2.59%	± 15%
Trichloroethene	ECD	4.097	1.25	508782	407026	3.97%	± 15%
1,1,2-Trichloroethane	ECD	5.695	6.25	233874	37420	12.39%	± 15%
Tetrachloroethene	ECD	5.836	1.25	1973427	1578742	4.22%	± 15%
1,1,1,2-Tetrachloroethane	ECD	6.802	1.25	1283291	1026633	9.70%	± 15%
1,1,2,2-Tetrachloroethane	ECD	8.142	1.25	202879	162303	10.33%	± 15%
Vinyl Chloride	PID	2.039	6.25	38790	6206	0.09%	± 30%
1,1-Dichloroethene	PID	2.748	6.25	54751	8760	3.21%	± 15%
trans-1,2-Dichloroethene	PID	3.195	6.25	88243	14119	8.55%	± 15%
cis-1,2-Dichloroethene	PID	3.862	6.25	46155	7385	7.29%	± 15%
Benzene	PID	4.625	6.25	97959	14073	12.07%	± 15%
Toluene	PID	6.304	6.25	68230	10917	10.45%	± 15%
Ethylbenzene	PID	7.851	6.25	43166	6907	8.21%	± 15%
m/p-Xylene	PID	7.940	12.5	90296	7224	14.92%	± 15%
o-Xylene	PID	8.415	6.25	48481	7757	12.75%	± 15%

# DAILY MID-POINT CHECK STANDARD

SITE NAME: 1200 S. Victory - Burbank, CA

LAB NAME: Optimal Technology Inc.

DATE: Oct. 26, 1995

ANALYST: Timothy L. Theisen

STD LOT ID NO.: LA-42995

INSTRUMENT ID: HP5890-

NORMAL INJECTION VOLUME: ECD = 50 ul / PID = 50 ul

INJECTION TIME: 7:53 am File: E/PCER-01.D

COMPOUND	DET	RT	MASS	AREA	RF	%DIFF	ACC RGE
Dichlorodifluoromethane	ECD						± 15%
Chloroethane	ECD						± 15%
Trichlorofluoromethane	ECD						± 15%
Trichlorotrifluoromethane	ECD						± 15%
Methylene Chloride	ECD	1.989	6.25	38373	6140	8.09%	± 15%
1,1-Dichloroethane	ECD	2.474	6.25	13912	2226	5.83%	± 15%
Chloroform	ECD						± 15%
1,1,1-Trichloroethane	ECD	3.307	1.25	1078723	862978	9.06%	± 15%
Carbon Tetrachloride	ECD						± 15%
1,2-Dichloroethane	ECD	3.628	6.25	51249	8200	4.59%	± 15%
Trichloroethene	ECD	4.179	1.25	474332	379466	10.47%	± 15%
1,1,2-Trichloroethane	ECD	5.781	6.25	234398	37504	12.19%	± 15%
Tetrachloroethene	ECD	5.923	1.25	1874327	1499462	9.03%	± 15%
1,1,1,2-Tetrachloroethane	ECD						± 15%
1,1,2,2-Tetrachloroethane	ECD						± 15%
Vinyl Chloride	PID						± 30%
1,1-Dichloroethene	PID	2.872	6.25	52324	8372	7.50%	± 15%
trans-1,2-Dichloroethene	PID	3.335	6.25	90213	14434	6.51%	± 15%
cis-1,2-Dichloroethene	PID	4.020	6.25	46322	7412	6.95%	± 15%
Benzene	PID	4.797	6.25	93213	14914	6.82%	± 15%
Toluene	PID	6.492	6.25	72431	11589	4.93%	± 15%
Ethylbenzene	PID	8.047	6.25	44321	7091	5.75%	± 15%
m/p-Xylene	PID	8.136	6.25	47453	7592	10.57%	± 15%
o-Xylene	PID	8.588	6.25	51328	8212	7.63%	± 15%

# LABORATORY CONTROL CHECK STANDARD

SITE NAME: 1200 S. Victory - Burbank, CA

LAB NAME: Optimal Technology Inc.

DATE: Oct. 26, 1995

ANALYST: Timothy L. Theisen

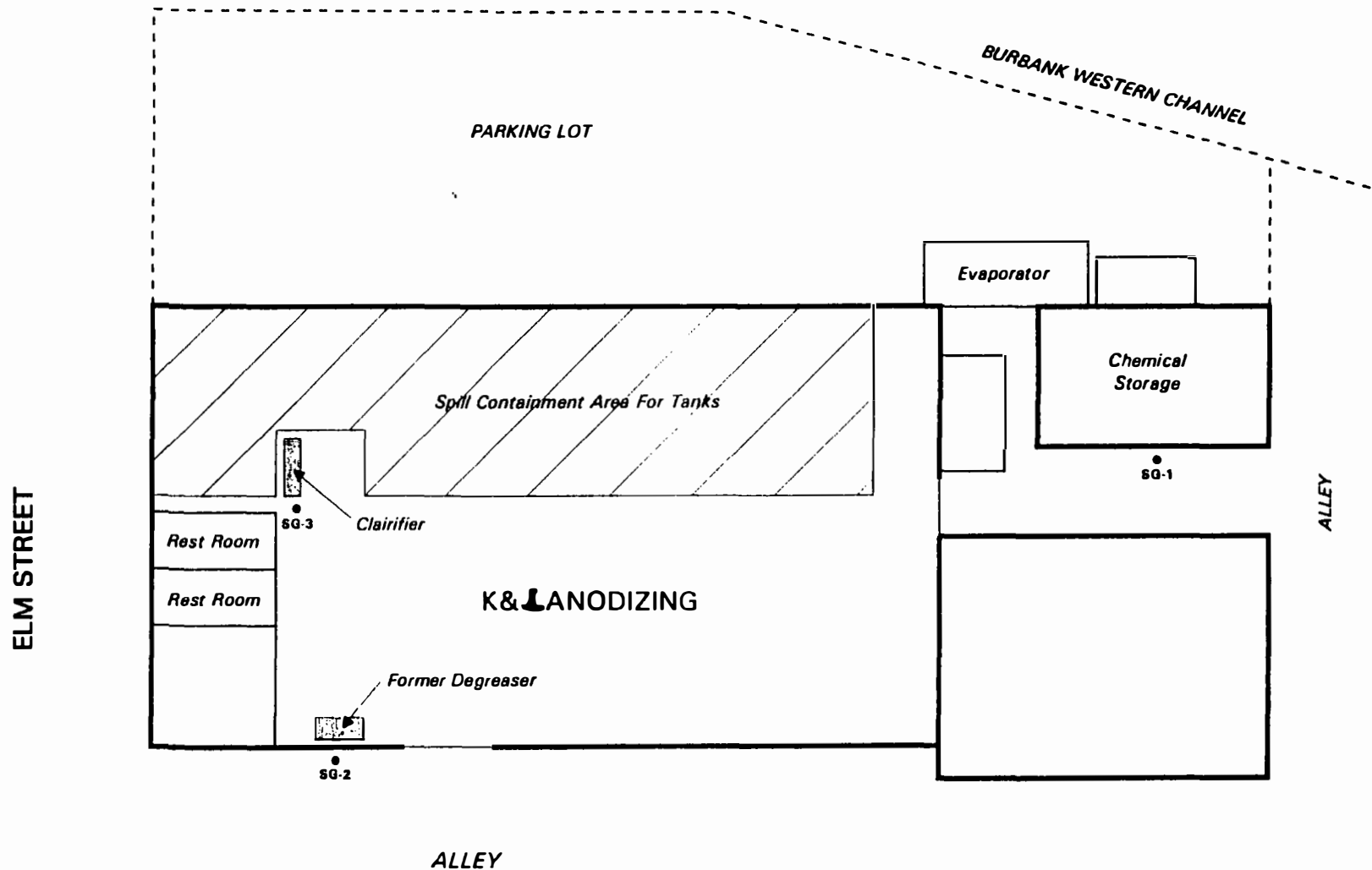
STD LOT ID NO.: LA-42995

INSTRUMENT ID: HP5890-

NORMAL INJECTION VOLUME: ECD = 50 ul / PID = 50 ul

INJECTION TIME: 1:47 pm File: E/PCER-2017.D

COMPOUND	DET	RT	MASS	AREA	RF	%DIFF	ACC RGE
Dichlorodifluoromethane	ECD						± 15 %
Chloroethane	ECD						± 15 %
Trichlorofluoromethane	ECD						± 15 %
Trichlorotrifluoromethane	ECD						± 15 %
Methylene Chloride	ECD	1.989	6.25	37656	6025	9.81%	± 15 %
1,1-Dichloroethane	ECD	2.474	6.25	12999	2080	12.01%	± 15 %
Chloroform	ECD						± 15 %
1,1,1-Trichloroethane	ECD	3.307	1.25	1073242	858594	9.52%	± 15 %
Carbon Tetrachloride	ECD						± 15 %
1,2-Dichloroethane	ECD	3.628	6.25	47544	7607	11.48%	± 15 %
Trichloroethene	ECD	4.179	1.25	459546	367637	13.26%	± 15 %
1,1,2-Trichloroethane	ECD	5.781	6.25	231298	37008	13.35%	± 15 %
Tetrachloroethene	ECD	5.923	1.25	1821437	1457150	11.59%	± 15 %
1,1,1,2-Tetrachloroethane	ECD						± 15 %
1,1,2,2-Tetrachloroethane	ECD						± 15 %
Vinyl Chloride	PID						± 30 %
1,1-Dichloroethene	PID	2.872	6.25	49298	7888	12.85%	± 15 %
trans-1,2-Dichloroethene	PID	3.335	6.25	85476	13676	11.42%	± 15 %
cis-1,2-Dichloroethene	PID	4.020	6.25	43987	7038	11.64%	± 15 %
Benzene	PID	4.797	6.25	86907	13905	13.12%	± 15 %
Toluene	PID	6.492	6.25	58843	11015	3.64%	± 15 %
Ethylbenzene	PID	8.047	6.25	41987	6718	10.71%	± 15 %
m/p-Xylene	PID	8.136	6.25	47367	7579	10.74%	± 15 %
o-Xylene	PID	8.588	6.25	48897	7824	12.01%	± 15 %



# EXPLANATION

- Soil Vapor Sampling Locations

NOT TO SCALE

**Optimal Technology Inc.**

P.O. Box 547  
 Summerland, CA 93067  
 Tel: (805) 969-2444 \* Fax: (805) 969-6597

**DATE:** Oct. 26, 1995

**COMPANY:**  
 THE REYNOLDS GROUP

**PROJECT NO:** OTI-100695

**APPROVED BY:** TLT

**TITLE:**  
 SOIL VAPOR SAMPLING LOCATIONS  
 1200 S. VICTORY BLVD. - BURBANK, CA

**FIGURE**

**1**